UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,829	04/27/2001	William E. Morgan	174-945	8476

23517 7590 05/16/2002

SWIDLER BERLIN SHEREFF FRIEDMAN, LLP
3000 K STREET, NW
BOX IP
WASHINGTON, DC 20007

EXAMINER
DUONG, THANH P

ART UNIT	PAPER NUMBER
3711	

DATE MAILED: 05/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/842,829	MORGAN ET AL.	
	Examiner	Art Unit	
	Tom P Duong	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 20 and 22 recite the limitation "...least about..." which is indefinite. See MPEP 2173.05(b).

Claim Rejections - 35 USC § 102/103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Aoyama (5,713,801) in view of Examiner Official Notice. Regarding claims 1 and 11-12, Aoyama discloses a golf ball (Fig. 2) having three or more concentrically disposed layers comprises: a core (115); hoop-stress layer (Fig. 2) having a tensile elastic modulus of at least 10,000 kpsi wound or wrapped about the core; an outermost thermoset material (110) disposed about the hoop stress layer having a thickness of greater than about 0.065 inches, and 0.08 inches (Col. 3, lines 18-20) and a dimpled outer surface (110). Although Aoyama does not defined the core comprising at least "one resilient elastomeric

material"; however, Aoyama discloses the core is made of polybutadiene (Col. 3, line 35) similar to the composition as claimed by the Applicant. Also, the examiner takes Official Notice that it is art-recognized that a polybutadiene material is a resilient elastomeric material. Regarding claims 2-4, Aoyama further discloses a golf ball wherein the core (115): comprises polybutadiene (Col. 3, line 35); wherein at least one hoop-stress material comprises a wire, thread, or filament (Col. 3, lines 8-10); wherein the at least one hoop-stress material comprises a continuous strand of diameter ranging from about 0.004 to 0.04 inches (Col. 1, lines 49-51).

3. Claims 8-18 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied in claim 1 in view of Boehm et al (5,919,100) and Examiner Official Notice. Regarding claim 8, Aoyama discloses the golf ball having at least one hoop-stress material which has a tensile elastic modulus of at least about 20,000 kpsi (Col. 3, lines 29-31). Regarding claims 9 and 17-18, Aoyama discloses the golf ball having at least one layer of an outermost thermoset material and/or first resilient elastomeric material which is formed from a material comprising at least one of polybutadiene, natural rubber, styrene butadiene rubber, isoprene, or mixtures thereof. (Col. 3, lines 34-38). The Examiner also takes Official Notice that this material as claimed by the Applicant is well known in the golf ball art. Regarding claim 10, the Examiner takes Official Notice that it is well known in the art that the outermost thermoset material or cover or other layers of a golf ball could be made from urethane which is the standard polymeric material. Regarding claim 13, Aoyama discloses the golf ball having at least one layer of an outermost thermoset material with thickness range as described in claims 11-12 but does not disclose a thickness of greater than about 0.1 inches. Applicant has not disclosed this particular thickness provides an advantage, is used for a particular purpose, or solves a stated

problem. Furthermore, it would have been obvious matter of design choice in one having ordinary skill in the art to modify the outermost thermoset material or layer of Aoyama to include the thickness greater than 0.1 inches as claimed by the Applicant. Regarding claims 14 and 15, Aoyama discloses the cover or outermost thermoset material is preferably ionomer or balata, but does not disclose the golf ball having at least one layer of an outermost thermoset material which has a hardness of about 10 to 90 Shore D and abrasion resistant material. Both Aoyama and Applicant disclose the cover or outermost thermoset material has similar composition and thus, the cover of Aoyama inherently has similar range of hardness as claimed by the Applicant. Furthermore, Boehm teaches that the cover of a golf ball should have a Shore D hardness of about 65 or greater (Col. 3, lines 9-10) to improve high abrasion resistance, high tear strength, and resilience (Col. 3, lines 57-60). Thus, it would have been obvious in one having ordinary skill in the art at the time the invention was to make a golf ball of Aoyama to have an outermost layer with a Shore D at least 65 or greater as taught by Boehm. One of ordinary skill in the art would have been motivated to do so in order to improve high tear strength, resilience, durability, flight performance, and restitution. Regarding claim 16, Aoyama does not disclose the golf ball further comprises a second resilient elastomeric material of at least one layer disposed between the hoop-stress layer and the outermost thermoset material. Boehm teaches the hardness and resiliency of the solid portion 16 can be varied to achieve certain desired parameters such as spin rate, compression, and initial velocity. This solid portion 16 has similar composition as the second resilient elastomeric material. Thus, it would have been obvious in one having ordinary skill in the art at the time of the invention was made to incorporate the solid portion 16 or second resilient elastomeric material of Boehm to Aoyama

golf ball to gain the benefit or desirable parameters as taught above by Boehm. Also, the number of resilient elastomeric materials or layers in a golf ball is an obvious matter of design choice in one having ordinary skill in the art. Regarding claim 19, Aoyama discloses a golf ball of four or more concentrically disposed layers, which comprises: a core of at least one layer comprising a resilient electrometric material; a hoop-stress layer comprising at least one wound material, having a tensile elastic modulus of at least about 10,000 kpsi, disposed about the core, wherein the at least one wound material forming the hoop-stress layer has a first cross-sectional area and an outermost thermoset material of at least one layer, having a dimpled outer surface but does not disclose a first cross sectional area coated with a binding material layer to create a second cross-sectional area greater than the first. However, Boehm et al. teaches suitable reactive liquids that form solids are silicate gels, agar gels, peroxide cured polyester resins, two-part epoxy resin systems and peroxide cured liquid polybutadiene rubber compositions. (Col. 9, lines 25-34). These components exhibit similar chemical and mechanical properties as the binding material and thus, they are equivalent to the binding material. Thus, it would have been obvious in one having ordinary skill in the art at the time the invention was to incorporate the coat binding material of Boehm to Aoyama's golf ball to form a tighter wound or having similar advantage of holding internal pressure of core as taught by Boehm. Regarding claim 20, Aoyama discloses the golf ball having at least one wound material which has a tensile elastic modulus of at least 20,000 kpsi (Col. 3, lines 29-31). Regarding claim 21, Aoyama discloses at least one wound material is a continuous strand of diameter ranging from about 0.004 to 0.04 inches (Col. 1, lines 49-51). Regarding claim 22, both Aoyama and Boehm do not disclose the golf ball having the second cross-sectional area is at least about 5 percent larger than the first

cross-sectional area but varying the thickness of the second cross-sectional area relative to the first cross-sectional area is an obvious matter of design choice in one having ordinary skill in the art. Also, Boehm discloses a reactive liquid system or binding material in claim 19 forms a solid or internal pressure within the first layer 20 or encapsulating layer. Thus, it would have been obvious in one having ordinary skill in the art at the time of the invention was made to include the second cross-sectional area at least about 5 percent larger than the first cross-sectional area of Boehm to Aoyama's golf ball in order to provide a tighter seal to the hoop-stress layer. Claim 23 refers to the binding material which is described in claim 19 above and is rejected for the same reasons. Claim 24 refers to the component of the outermost thermoset material or layer and this limitation is described in claim 9 above and is rejected for the same reasons. Claim 25 refers to the golf ball having at least one layer of an outermost thermoset material having a thickness of greater than about 0.08 inches and this limitation is described in claim 9 above and is rejected for the same reasons.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied in claim 1 above, and in further view of Maehara et al. (5,913,736) and Nomura et al (4,938,471). Regarding claim 5, Aoyama discloses all the elements except shape memory alloys. Maehara et al. teaches that the shape memory alloy layer provides an effect of tightening the core, thus improving the golf ball's resiliency, resulting an increased travel distance. Thus, it would have been obvious in one having ordinary skill in the art at the time of the invention was made to incorporate the shape memory alloy of Maehara to Aoyama's golf ball to achieve the benefit as taught by Maehara. Regarding claim 6, Aoyama discloses golf ball having at least one hoop-stress material is wound or wrapped but does not define in a criss-cross, basket weave, or

open pattern about the core. Nomura et al. discloses in the prior art that thread wound golf balls are generally manufactured by winding a rubber thread with a high elongation on a core of rubber or liquid to form a core ball, and enclosing the core ball in a cover. For winding thread rubber around the core, there are known two techniques, a random winding or basket winding technique and a great circle winding technique. These techniques have a criss-cross, basket weave, or open pattern. Also, the wounding techniques or patterns are an obvious matter of design choice in one having ordinary skill in the art. Regarding claim 7, it appears that Aoyama discloses the golf ball having the at least one hoop-stress material comprises a plurality of braided elements.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1 and 19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 31 of copending Application No. 09841910. Although the conflicting claims are not identical, they are not

patentably distinct from each other because the differences between the patent claims and the instant application claims are minor and obvious from one another.

a. In the instant claim 19, the recitation of "A golf ball of four or more concentrically disposed layers, which comprise: a core of at least one layer comprising a resilient elastomeric material; a hoop-stress layer comprising at least one wound material, having a tensile elastic modulus of at least about 10,000 kpsi, disposed about the core, wherein the at least one wound material forming the hoop-stress layer has a first cross-sectional area and is coated with a binding material layer to create a second cross-sectional area greater than the first; and an outermost thermoset material of at least one layer, having a dimpled outer surface, disposed about the binding material layer " is obvious alternative language of "A golf ball having four more layers: comprising: a center; a cover comprising at least one layer; and a hoop-stress layer comprising at least one material with a tensile elastic modulus of at least about 10,000 kpsi, situated between two of the three innermost layers, wherein the material has a first cross-sectional area and the material is coated with a binding material to provide a coated material with a second cross-sectional area greater than the first " in the copending application.

b. In the instant claim 1, the recitation of "A golf ball having three or more concentrically disposed layers, which comprises: a core of at least one layer comprising at least one resilient elastomeric material; a hoop-stress layer comprising at least one hoop-stress material having a tensile elastic modulus of at least about 10,000 kpsi wound or wrapped about the core; and an outermost thermoset material of at least one layer disposed about the hoop-stress layer and having a thickness of greater than about 0.065 inches and a dimpled outer surface" is obvious alternative language of "A golf ball having four more layers: comprising: a center; a

cover comprising at least one layer; and a hoop-stress layer comprising at least one material with a tensile elastic modulus of at least about 10,000 kpsi, situated between two of the three innermost layers, wherein the material has a first cross-sectional area and the material is coated with a binding material to provide a coated material with a second cross-sectional area greater than the first " in the copending application. In the instant claim 1, the Examiner takes Official Notice by convention that all golf ball covers will have certain range of thickness including a thickness of 0.065 inches which is claimed by the Applicant.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (703) 305-4559. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Sewell can be reached on (703) 308-2126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9302 for regular communications and (703) 746-9302 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-4119.

Tom Duong
May 8, 2002

Paul T. Sewell
Supervisory Patent Examiner
Group 3700